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ALFRED K. DASSLER

December 9, 2004
DateIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gerhard Fritz Blöhdorn
Applic. No. : 10/695,365 Confirmation No. 5960
Filed : October 28, 2003

Title : Apparatus for Controlling the Temperature of
an Exposure Drum in a Printing Plate Exposer

Examiner : Marvin P. Crenshaw
Group Art Unit : 2854
Docket No. : HK-780
Customer No. : 24131

A M E N D M E N T

Mail Stop Non-Fee Amendment
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S i r :

Responsive to the Office action dated September 9, 2004 kindly
amend the above-identified application as follows:

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Amendments to the Specification begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

Remarks/Arguments begin on page 9 of this paper.

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Specification Amendments

Replace the paragraph between lines 11-19 on page 10, with the following:

--With the foregoing and other objects in view there is provided, in accordance with the invention, an apparatus for controlling a temperature of a recording material in an external drum exposer having an exposure drum for ~~holding~~ holding the recording material. The apparatus contains an internal pipe disposed on an axis of the exposure drum, and at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into the internal pipe.--

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Claim Amendments

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): An apparatus for controlling a temperature of a recording material in an external drum exposer having an exposure drum for ~~holding~~ holding the recording material, the apparatus comprising:

an internal pipe disposed on an axis of the exposure drum; and

at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into said internal pipe.

Claim 2 (original): The apparatus according to claim 1, further comprising webs connected to said internal pipe, the exposure drum is a cylinder connected to said internal pipe by said webs.

Claim 3 (original): The apparatus according to claim 2, wherein the cylinder, said internal pipe and said webs are fabricated from a thermally conductive material.

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Claim 4 (original): The apparatus according to claim 2, wherein the cylinder, said internal pipe and said webs are fabricated from an extruded part.

Claim 5 (original): The apparatus according to claim 1, wherein said rotary lead-through is disposed at a first end of the exposure drum with which the temperature-controlled liquid is led into said internal pipe; and

further comprising a further rotary lead-through disposed at a second end of the exposure drum with which the temperature-controlled liquid is led out of said internal pipe.

Claim 6 (original): The apparatus according to claim 1, wherein said rotary lead-through is a two-way rotary lead-through disposed at one end of the exposure drum, said two-way rotary lead-through leading the temperature-controlled liquid into and out of said internal pipe.

Claim 7 (original): The apparatus according to claim 1, further comprising a temperature control unit disposed in a path of the temperature-controlled liquid for keeping the temperature-controlled liquid at a constant temperature.

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Claim 8 (original): The apparatus according to claim 1,
wherein the temperature-controlled liquid is water.

Claim 9 (original): The apparatus according to claim 8,
wherein the temperature-controlled liquid further contains at
least one of a corrosion-prevention additive and an antifreeze
additive.

Claim 10 (original): The apparatus according to claim 3,
wherein said thermally conductive material is aluminum.

Claim 11 (original): The apparatus according to claim 1,
wherein the
recording material is a printing plate.

Claim 12 (currently amended): An exposer for controlling a
temperature of a recording material, comprising:

an exposure drum for ~~holding~~ holding the recording material and
having an axis;

an internal pipe disposed along said axis of said exposure
drum; and

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at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into said internal pipe.

Claim 13 (currently amended): An exposer for controlling a temperature of a recording material, comprising:

an exposure body for ~~holding~~ holding the recording material and having an axis;

an internal pipe disposed along said axis of said exposure body; and

at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into said internal pipe.

Claim 14 (currently amended): An exposure drum for controlling a temperature of a recording material, comprising:

an cylindrical body for ~~holding~~ holding the recording material and having an axis;

an internal pipe disposed along said axis of said cylindrical body; and

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at least one rotary lead-through fluidically communicating
with and through which a temperature-controlled liquid flows
into said internal pipe.

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Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-14 remain in the application. Claims 1, 12, 13, and 14 have been amended so as to correct a misspelling of the word holding. No new matter has been added.

In the second paragraph on page 2 of the Office action, claims 1, 2, 5-8, 12, 13, and 14 have been rejected as being fully anticipated by Vrotacoe et al. (U.S. Patent No. 5,535,674) (hereinafter "Vrotacoe") under 35 U.S.C. § 102.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1, 12, 13, and 14 call for, *inter alia*:

an exposure drum for holding the recording material and having an axis; and

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at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into the internal pipe.

It is noted that the corporate assignee of the Vrotacoe reference is also the assignee of the instant application. Therefore, applicant is very familiar with the Vrotacoe reference.

The Vrotacoe reference discloses a printing unit cylinder in an offset printing press, which can be used either as a printing cylinder or as a transfer cylinder (column 2, lines 61-67). No recording material, such as a printing plate, is exposed (imaged) in the printing press. The fluid contained within the printing cylinder does not serve to control the temperature of the material mounted on the cylinder (i.e. either a printing plate ready for printing or a transfer blanket), but instead the fluid serves to prevent bending of the printing unit cylinder due to an uneven distribution of temperature in the cylinder. Vrotacoe explicitly discloses that the absolute temperature level is of less importance and that the object of his invention is to evenly distribute a non-uniform heat input (column 1, line 50 to column 2, line 4). In one embodiment Vrotacoe discloses that the liquid is

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filled into the cylinder and then the inlets (21) are closed by plugs (14) (column 4, lines 3-5 and Fig. 3). In another embodiment, Vrotacoe discloses that the liquid is circulated by a circulation system (100) outside the cylinder or by a pump (101) inside the cylinder (column 5, lines 27-33; Figs. 4b and 4c). Vrotacoe does not disclose that the liquid is temperature-controlled.

The reference does not show an exposure drum for holding the recording material and having an axis, as recited in claims 1, 12, 13, and 14 of the instant application. The Vrotacoe reference discloses a printing unit cylinder in an offset printing press, which can be used either as printing cylinder or as a transfer cylinder. Vrotacoe does not disclose an exposure drum for holding a recording material. This is contrary to the invention of the instant application as claimed, in which an exposure drum holds the recording material.

Furthermore, the reference does not show at least one rotary lead-through fluidically communicating with and through which a temperature-controlled liquid flows into the internal pipe, as recited in claims 1, 12, 13, and 14 of the instant application. The Vrotacoe reference discloses that the liquid in the cylinder is either filled into the cylinder and the

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cylinder is plugged or that a circulation system circulates the liquid. Vrotacoe explicitly discloses that the absolute temperature level is of less importance and that the object of his invention is to evenly distribute a non-uniform heat input. Vrotacoe does not disclose a temperature controlled liquid flowing through an internal pipe of an exposure drum. This is contrary to the invention of the instant application as claimed, in which at least one rotary lead-through, which fluidically communicates with and through which a temperature-controlled liquid flows into the internal pipe.

Since claim 1 is believed to be allowable, dependent claims 2, 5-8, and 12 are believed to be allowable as well.

Even though claim 5 is believed to be allowable, the following remarks pertain to claim 5.

With respect to claim 5, Vrotacoe does not disclose a rotary lead-through for the liquid at a first end of the cylinder and a further rotary lead-through at a second end. What is disclosed and shown in Fig. 2 of Vrotacoe is an inlet (7) for gas and a bore (13) for applying gas pressure to the printing unit cylinder for blanket removal or for plate removal (column 3, lines 40-65). In Vrotacoe the gas pressure system for

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plate removal is completely independent from the liquid system for heat distribution.

In the third paragraph on page 4 of the Office action, claims 3, 4, and 9 have been rejected as being obvious over by Vrotacoe (U.S. Patent No.5,535,674) in view of Feller et al. (U.S. Patent No. 6,065,402) (hereinafter "Feller") under 35 U.S.C. § 103. Feller does not make up for the deficiencies of Vrotacoe. Since claim 1 is believed to be allowable, dependent claims 3, 4, and 9 are believed to be allowable as well.

Even though claims 3, 4, and 9 are believed to be allowable, the following remarks pertain to claims 3, 4, and 9. With respect to claims 3, 4, and 9, Feller does not teach a thermally conductive material and does not explain how the internal pipe and the webs are fabricated. Feller is silent about extruded parts.

In the third paragraph on page 5 of the Office action, claim 10 has been rejected as being obvious over Vrotacoe (U.S. Patent No.5,535,674) in view of Feller (U.S. Patent No. 6,065,402) and further in view of Marmin et al. (U.S. Patent No. 5,967,036) (hereinafter "Marmin") under 35 U.S.C. § 103. Marmin does not make up for the deficiencies of Vrotacoe and

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Feller. Since claim 1 is believed to be allowable, dependent claim 10 is believed to be allowable as well.

In the last paragraph on page 5 of the Office action, claim 11 has been rejected as being obvious over Vrotacoe (U.S. Patent No. 5,535,674) in view of Kurosawa (U.S. Patent No. 5,074,213) under 35 U.S.C. § 103. Kurosawa does not make up for the deficiencies of Vrotacoe. Since claim 1 is believed to be allowable, dependent claim 10 is believed to be allowable as well.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 12, 13, or 14. Claims 1, 12, 13, and 14 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-14 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone

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call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner & Greenberg P.A., No. 12-1099.

Respectfully submitted,


For Applicant(s)

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